



Massachusetts Department of Environmental Protection
Source Water Assessment and Protection (SWAP) Report
for
East Bridgewater Water Department

What is SWAP?

The Source Water Assessment and Protection (SWAP) program, established under the federal Safe Drinking Water Act, requires every state to:

- inventory land uses within the recharge areas of all public water supply sources;
- assess the susceptibility of drinking water sources to contamination from these land uses; and
- publicize the results to provide support for improved protection.

Susceptibility and Water Quality

Susceptibility is a measure of a water supply's potential to become contaminated due to land uses and activities within its recharge area.

A source's susceptibility to contamination does *not* imply poor water quality.

Water suppliers protect drinking water by monitoring for more than 100 chemicals, disinfecting, filtering, or treating water supplies, and using source protection measures to ensure that safe water is delivered to the tap.

Actual water quality is best reflected by the results of regular water tests. To learn more about your water quality, refer to your water supplier's annual Consumer Confidence Reports.

Table 1: Public Water System Information

<i>PWS Name</i>	East Bridgewater Water Department
<i>PWS Address</i>	49 Dean Place
<i>City/Town</i>	East Bridgewater, MA 02333
<i>PWS ID Number</i>	4083000
<i>Local Contact</i>	Scott S. McCann
<i>Phone Number</i>	(508) 378-1630

Introduction

We are all concerned about the quality of the water we drink. Drinking water wells may be threatened by many potential contaminant sources, including storm runoff, road salting, and improper disposal of hazardous materials. Citizens and local officials can work together to better protect these drinking water sources.

Purpose of this report:

This report is a planning tool to support local and state efforts to improve water supply protection. By identifying land uses within water supply protection areas that may be potential sources of contamination, the assessment helps focus protection efforts on appropriate Best Management Practices (BMPs) and drinking water source protection measures.

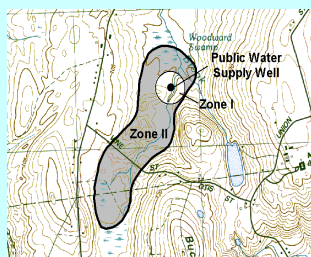
Refer to Table 3 for Recommendations to address potential sources of contamination. Department of Environmental Protection (DEP) staff are available to provide information about funding and other resources that may be available to your community.

This report includes the following sections:

1. Description of the Water System
2. Land Uses within Protection Areas
3. Source Water Protection Conclusions and Recommendations
4. Appendices

What is a Protection Area?

A well's water supply protection area is the land around the well where protection activities should be focused. Each well has a Zone I protective radius and a Zone II protection area.



Glossary

Aquifer: An underground water-bearing layer of permeable material that will yield water in a usable quantity to a well.

Hydrogeologic Barrier: An underground layer of impermeable material (i.e. clay) that resists penetration by water.

Recharge Area: The surface area that contributes water to a well.

Zone I: The area closest to a well; a 100 to 400 foot radius proportional to the well's pumping rate. This area should be owned or controlled by the water supplier and limited to water supply activities.

Zone II: The primary recharge area for the aquifer. This area is defined by hydrogeologic studies that must be approved by DEP. Refer to the attached map to determine the land within your Zone II.

Section 1: Description of the Water System

Zone II #: 73

Susceptibility: High

Well Names	Source IDs
GP Well #5	4083003-05G

Zone II #: 357

Susceptibility: High

Well Names	Source IDs
GP Well #1	4083003-01G
GP Well #2	4083003-02G
GP Well #3	4083003-03G
GP Well #4	4083003-04G

East Bridgewater Department receives its water from five gravel packed type groundwater wells located in two Zone II groundwater protection areas, see above tables. Also, each well has a Zone I protection area of 400 feet. The wells are located in an aquifer with a high vulnerability to contamination due to the absence of hydrogeologic barriers (i.e. clay) that can prevent contaminant migration. Please refer to the attached map to view the boundaries of the Zone Is and Zone IIs.

All water pumped into the system is treated with lime slurry to soften the water, and a Calgon product; C-5 is added to help with a manganese problem. For current information on monitoring results and treatment, please contact the Public Water System contact person listed above in Table 1 for a copy of the most recent Consumer Confidence Report. Drinking water monitoring reporting data are also available on the web at <http://www.epa.gov/safewater/ccr1.html>.

Section 2: Land Uses in the Protection Areas

The Zone IIs for East Bridgewater are dominated by a mixture of forest and residential land uses with smaller areas of agricultural, commercial, and industrial land uses (refer to attached map for details). Land uses and activities that are potential sources of contamination are listed in Table 2, with further detail provided in the Table of Regulated Facilities and Table of Underground Storage Tanks in Appendix A.

Key Land Uses and Protection Issues include:

1. Zone Is
2. Residential land uses
3. Transportation corridors
4. Hazardous materials storage and use
5. Oil or hazardous material contamination sites
6. Agricultural activities
7. Comprehensive wellhead protection planning

The overall ranking of susceptibility to contamination for the system is high, based on the presence of at least one high threat land use within the water supply protection areas, as seen in Table 2.

1. Zone Is – The Zone I for each of the wells is a 400 foot radius around the wellhead. Massachusetts drinking water regulations (310 CMR 22.00 Drinking

Water) requires public water suppliers to own the Zone I, or control the Zone I through a conservation restriction. The five Zone Is for the wells are owned or controlled by East Bridgewater. Only water supply activities are allowed in the Zone I. However, many public water supplies were developed prior to the Department's regulations and contain non water supply activities such as homes and public roads.

Zone I Recommendations:

- ✓ Use BMPs for the storage, use, and disposal of hazardous materials such as water supply chemicals and maintenance chemicals.
- ✓ Do not use or store pesticides, fertilizers or road salt within the Zone I.
- ✓ Keep any new non water supply activities out of the Zone I.

2. Residential Land Uses – Residential land uses are common throughout the Zone IIs. None of the areas have public sewers, and so all use septic systems. If managed improperly, activities associated with residential areas can contribute to drinking water contamination. Common potential sources of contamination include:

- **Septic Systems** – Improper disposal of household hazardous chemicals to septic systems is a potential source of contamination to the groundwater because septic systems lead to the ground. If septic systems fail or are not properly maintained they can be a potential source of microbial contamination.
- **Household Hazardous Materials** - Hazardous materials may include automotive wastes, paints, solvents, pesticides, fertilizers, and other substances. Improper use, storage, and disposal of chemical products used in homes are potential sources of contamination.
- **Heating Oil Storage** - If managed improperly, Underground and Aboveground Storage Tanks (UST and AST) can be potential sources of contamination due to leaks or spills of the fuel oil they store.
- **Stormwater** – Catch basins transport stormwater from roadways and adjacent properties to the ground. As flowing stormwater travels, it picks up debris and contaminants from streets and lawns. Common potential contaminants include lawn chemicals, pet waste, and

contaminants from automotive leaks, maintenance, washing, or accidents.

Residential Land Use Recommendations:

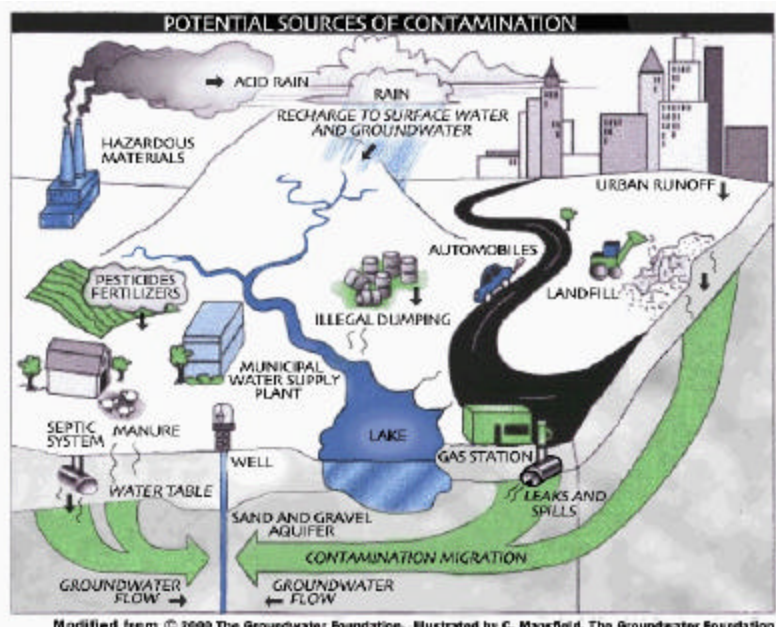
- ✓ Educate residents on best management practices (BMPs) for protecting water supplies. Distribute the fact sheet “Residents Protect Drinking Water” available in Appendix C and on www.mass.gov/dep/brp/dws/protect.htm, which provides BMPs for common residential issues.
- ✓ Work with planners to control new residential developments in the water supply protection areas.
- ✓ Promote BMPs for stormwater management and pollution controls. Visit DEP’s web site for additional information and assistance at <http://www.state.ma.us/dep/brp/wm/>

Benefits of Source Protection

Source Protection helps protect public health and is also good for fiscal fitness:

- Protects drinking water quality at the source
- Reduces monitoring costs through the DEP Waiver Program
- Treatment can be reduced or avoided entirely, saving treatment costs
- Prevents costly contamination clean-up
- Preventing contamination saves costs on water purchases, and expensive new source development

Contact your regional DEP office for more information on Source Protection and the Waiver Program.



3. Transportation Corridors - Routes 18, 27 and 106 run through the Zone IIs. Local roads are common throughout the Zone IIs. Roadway construction, maintenance, and typical highway use can all be potential sources of contamination. Accidents can lead to spills of gasoline and other potentially dangerous transported chemicals. Roadways are frequent sites for illegal dumping of hazardous or other potentially harmful wastes. De-icing salt, automotive chemicals and other debris on roads are picked up by stormwater and wash in to catchbasins.

Railroad tracks run through the water supply protection areas. Rail corridors serving passenger or freight trains are potential sources of contamination due to chemicals released during normal use, track maintenance, and accidents. Accidents can release spills of train engine fluids and commercially transported chemicals.

Transportation Corridor Recommendations:

- ✓ Wherever possible, ensure that drains discharge stormwater outside of the Zone I.
- ✓ Identify stormwater drains and the drainage system along transportation corridors. If maps aren't yet available, work with town officials to investigate mapping options such as the upcoming Phase II Stormwater Rule requiring some communities to complete stormwater mapping.
- ✓ Work with local emergency response teams to ensure that any spills within the Zone II can be effectively contained. Review storm drainage maps with emergency response teams.
- ✓ Work with the Town and State to best manage stormwater in the Zone II. Best management practices include street sweeping, vegetative swales, and regular catch basin inspection, cleaning and maintenance.
- ✓ Work with local officials during their review of the railroad right of way Yearly Operating Plans to ensure that water supplies are protected during vegetation control.

What are "BMPs?"

Best Management Practices (BMPs) are measures that are used to protect and improve surface water and groundwater quality. BMPs can be structural, such as oil & grease trap catch basins, nonstructural, such as hazardous waste collection days or managerial, such as employee training on proper disposal procedures.

For More Information

Contact Isabel Collins of DEP's Southeast Regional Office at (508) 946-2726 for more information and assistance on improving current protection measures.

Copies of this report have been provided to the public water supplier, board of health, and the town.

4. Hazardous Materials Storage and Use –

Commercial and industrial land uses are present in both Zone IIs. Activities associated with commercial and industrial land use are often the greatest concern when evaluating water supply protection. Many small businesses and industries use hazardous materials, produce hazardous waste products, and/or store large quantities of hazardous materials in UST/AST. If hazardous materials are improperly stored, used, or disposed, they become potential sources of contamination. Hazardous materials should never be disposed of to a septic system or floor drain leading directly to the ground.

Hazardous Materials Storage and Use Recommendations:

- ✓ Educate local businesses on best management practices for protecting water supplies. Distribute the fact sheet "Businesses Protect Drinking Water" available in Appendix C and on www.mass.gov/dep/brp/dws/protect.htm, which provides BMP's for common business

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Source Protection Decreases Risk

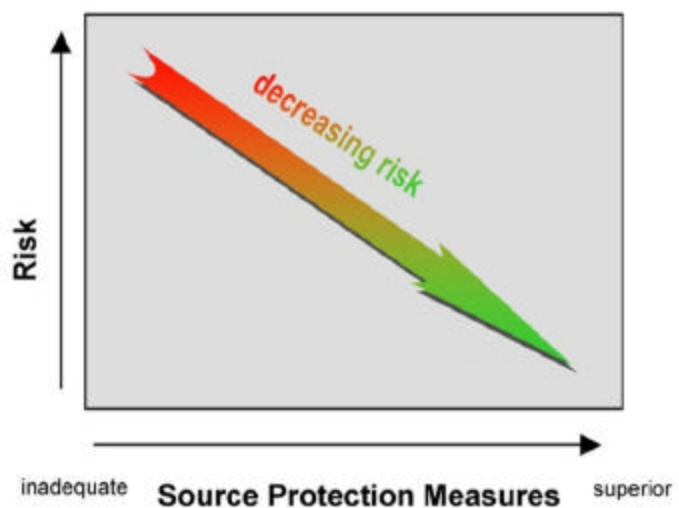


Figure 2: Risk of contamination decreases as source protection increases. This is true for public water systems of any susceptibility ranking, whether High, Moderate, or Low.

Potential Source of Contamination vs. Actual Contamination

The activities listed in Table 2 are those that typically use, produce, or store contaminants of concern, which, if managed improperly, are potential sources of contamination (PSC).

It is important to understand that a release may never occur from the potential source of contamination provided facilities are using best management practices (BMPs). If BMPs are in place, the actual risk may be lower than the threat ranking identified in Table 2. Many potential sources of contamination are regulated at the federal, state and/or local levels, to further reduce the risk.

Table 2: Land Use in the Protection Areas (Zones I and II)

For more information, refer to Appendix A: Regulated Facilities within the Water Supply Protection Area

Activities	Quantity	Threat*	Zone II	Potential Source of Contamination
Agricultural				
Dairy Farms	1	M	357	Manure (microbial contaminants): improper handling
Livestock Operations	1	M	357	Manure (microbial contaminants): improper handling
Manure Storage or Spreading	1	H	357	Manure (microbial contaminants): improper handling
Nurseries	1	M	73	Fertilizers, pesticides, and other chemicals: leaks, spills, improper handling, or over-application
Commercial				
Car/Truck/Bus Washes	1	L	357	Vehicle wash water, soaps, oils, greases, metals, and salts: improper management
Body Shops	3	H	73	Vehicle paints, solvents, and primer products: improper management
Gas Stations	5	H	Both	Automotive fluids and fuels: spills, leaks, or improper handling or storage
Service Stations/ Auto Repair Shops	few	H	Both	Automotive fluids and solvents: spills, leaks, or improper handling
Cemeteries	2	M	73	Over-application of pesticides: leaks, spills, improper handling; historic embalming fluids
Dry Cleaners	2	H	Both	Solvents and wastes: spills, leaks, or improper handling
Funeral Homes	1	L	73	Hazardous chemicals: spills, leaks, or improper handling
Laundromats	2	L	Both	Wash water: improper management
Nursing Homes	1	L	73	Microbial contaminants: improper management
Paint Shops	3	H	73	Paints, solvents, other chemicals: spills, leaks, or improper handling or storage
Photo Processors	1	H	73	Photographic chemicals: spills, leaks, or improper handling or storage

Table 2 Continued: Land Use in the Protection Areas (Zones I and II)

For more information, refer to Appendix A: Regulated Facilities within the Water Supply Protection Area

Activities	Quantity	Threat*	Zone II	Potential Source of Contamination
Commercial Continued				
Railroad Tracks And Yards	2	H	Both	Herbicides: over-application or improper handling; fuel storage, transported chemicals, and maintenance chemicals:
Hairdressers	1	M	73	Improper disposal of chemicals to septic systems.
Industrial				
Chemical Manufacture Or Storage	1	H	73	Chemicals and process wastes: spills, leaks, or improper handling or storage
Electroplaters	1	H	73	Solvents and other chemicals: spills, leaks, or improper handling or storage
Foundries Or Metal Fabricators	1	H	73	Solvents and other chemicals: spills, leaks, or improper handling or storage
Fuel Oil Distributors	1	H	357	Fuel oil: spills, leaks, or improper handling or storage
Jewelry or Metalplating	1	H	73	Solvents, other chemicals, and process wastes: spills, leaks, or improper handling or storage
Residential				
Fuel Oil Storage (at residences)	Numerous	M	Both	Fuel oil: spills, leaks, or improper handling
Lawn Care / Gardening	Numerous	M	Both	Pesticides: over-application or improper storage and disposal
Septic Systems / Cesspools	Numerous	M	Both	Hazardous chemicals: microbial contaminants, and improper disposal
Miscellaneous				
Aboveground Storage Tanks	1	M	357	Materials stored in tanks: spills, leaks, or improper handling
Aquatic Wildlife	Some	L	Both	Microbial contaminants
Clandestine Dumping	Occasional	M	Both	Debris containing hazardous materials or wastes
Fishing/Boating	2	L	Both	Fuel and other chemical spills, microbial contaminants
Oil or Hazardous Material Sites	7	--	Both	Tier Classified Oil or Hazardous Materials Sites are not ranked due to their site-specific character. Individual sites
Road And Maintenance Depots	1	M	73	Deicing materials, automotive fluids, fuel storage, and other chemicals: spills, leaks, or improper handling or storage
Schools, Colleges, and Universities	2	M	73	Fuel oil, laboratory, art, photographic, machine shop, and other chemicals: spills, leaks, or improper handling or
Small quantity hazardous waste	1	M	73	Hazardous materials and waste: spills, leaks, or improper handling or storage

Table 2 Continued: Land Use in the Protection Areas (Zones I and II)

For more information, refer to Appendix A: Regulated Facilities within the Water Supply Protection Area

Activities	Quantity	Threat*	Zone II	Potential Source of Contamination
Miscellaneous Continued				
Stormwater Drains/ Retention Basins	Numerous	L	Both	Debris, pet waste, and chemicals in stormwater from roads, parking lots, and lawns
Transmission Line Rights-of-Way - Type:	1	L	357	Corridor maintenance pesticides: over-application or improper handling; construction
Transportation Corridors	Numerous	M	Both	Fuels and other hazardous materials: accidental leaks or spills; pesticides: over-application or improper handling
Underground Storage Tanks	17	H	Both	Stored materials: spills, leaks, or improper handling
Utility Substation Transformers	2	L	Both	Chemicals and other materials including PCBs: spills, leaks, or improper handling
Very Small Quantity Hazardous Waste	8	L	Both	Hazardous materials and waste: spills, leaks, or improper handling or storage

Notes for Table 2:

1. When specific potential contaminants are not known, typical potential contaminants or activities for that type of land use are listed. Facilities within the watershed may not contain all of these potential contaminant sources, may contain other potential contaminant sources, or may use Best Management Practices to prevent contaminants from reaching drinking water supplies.
2. For more information on regulated facilities, refer to Appendix A: Regulated Facilities within the Water Supply Protection Area information about these potential sources of contamination.
3. For information about Oil or Hazardous Materials Sites in your protection areas, refer to Appendix B: Tier Classified Oil and/or Hazardous Material Sites.

* **THREAT RANKING** - The rankings (high, moderate or low) represent the relative threat of each land use compared to other PSCs. The ranking of a particular PSC is based on a number of factors, including: the type and quantity of chemicals typically used or generated by the PSC; the characteristics of the contaminants (such as toxicity, environmental fate and transport); and the behavior and mobility of the pollutants in soils and ground-water.

(Continued from page 4)

issues.

- ✓ Work with local businesses to register those facilities that are unregistered generators of hazardous waste or waste oil. Partnerships between businesses, water suppliers, and communities enhance successful public drinking water protection practices.
- ✓ Educate local businesses on Massachusetts floordrain requirements. See brochure "Industrial Floor Drains" for more information.

5. Presence of Oil or Hazardous Material Contamination Sites – The Zone II contains DEP Tier Classified Oil and/or Hazardous Material Release Sites indicated on the map as Release Tracking Numbers 4-0000526, 4-0000594, 4-0000781, 4-0000860, 4-0012369, 4-0012940, 4-0013087 and 4-0014476. Refer to the attached map and Appendix B for more information.

Oil or Hazardous Material Contamination Sites Recommendation:

- ✓ Monitor progress on any ongoing remedial action conducted for the known oil or contamination sites.

6. Agricultural Activities – The Zone IIs contain several agricultural activities that include dairy operations, livestock operations, nurseries and cranberry bogs. Pesticides and fertilizers have the potential to contaminate a drinking water source if improperly stored, applied, or disposed. If not contained or applied properly, animal waste from barnyards, manure pits and field application are potential sources of contamination to ground and surface water.

Agricultural Activities Recommendation:

- ✓ Work with farmers in your protection areas to make them aware of your water supply and to encourage the use of a US Natural Resources Conservation Service farm plan to protect water supplies.
- ✓ Work with farmers to investigate grants and loans designed to protect surface and groundwater. See <http://www.nrcs.usda.gov/programs/farmbill/2002/pdf/EQIPFct.pdf> for more information on the USDA Environmental Quality Incentives Program (EQIP). Information on the MA Department of Food Agriculture's Agricultural Environmental Enhancement Program (AEEP) is available on the web at <http://www.state.ma.us/dfa/programs/aEEP/>.

7. Protection Planning – Currently, the Town does not meet DEP's Wellhead Protection regulations 310 CMR 22.21(2). To meet DEP's requirements East Bridgewater must submit copies of its local bylaws, overlay district maps and floordrain regulations to DEP for approval. Protection planning protects drinking water by managing the land area that supplies water to a well. A Wellhead Protection Plan coordinates community efforts, identifies protection strategies, establishes a timeframe for implementation, and provides a forum for public participation. There are resources available to help communities develop a plan for protecting drinking water supply wells.

Protection Planning Recommendations:

- ✓ Expand the Town's protection team to include representatives from local businesses, citizen's groups and other interested groups. Use the protection committee to implement the long term goals of your Wellhead Protection Plan.
- ✓ Coordinate efforts with local officials to ensure local wellhead protection controls with current MA Wellhead Protection Regulations 310 CMR 22.21 (2). If there are no local controls or they do not meet the current regulations, adopt controls that meet 310 CMR 22.21(2). For more information on DEP land use controls see <http://mass.gov/dep/brp/dws/protect.htm>.
- ✓ If local controls do not regulate floordrains, be sure to include floordrain controls that meet 310 CMR 22.21(2).
- ✓ Work with town boards to review and provide recommendations on proposed development within your water supply protection areas. To obtain information on build-out analyses for the town, see the Executive Office of

Top 5 Reasons to Develop a Local Wellhead Protection Plan

- ➊ Reduces Risk to Human Health
- ➋ Cost Effective! Reduces or Eliminates Costs Associated With:
 - ♦ Increased groundwater monitoring and treatment
 - ♦ Water supply clean up and remediation
 - ♦ Replacing a water supply
 - ♦ Purchasing water
- ➌ Supports municipal bylaws, making them less likely to be challenged
- ➍ Ensures clean drinking water supplies for future generations
- ➎ Enhances real estate values – clean drinking water is a local amenity. A community known for its great drinking water in a place people want to live and businesses want to locate.

Environmental Affairs' community preservation web site, <http://commpres.env.state.ma.us/>.



Other land uses and activities within the Zone II include auto repair shops, gas stations, dry cleaners, electroplaters, foundries and schools. Refer to Table 2 and Appendix A for more information about these land uses.

Identifying potential sources of contamination is an important initial step in protecting your drinking water sources. Further local investigation will provide more in-depth information and may identify new land uses and activities that are potential sources of contamination. Once potential sources of contamination are identified, specific recommendations like those below should be used to better protect your water supply.

Section 3: Source Water Protection Conclusions and Recommendations

Current Land Uses and Source Protection:

As with many water supply protection areas, the system Zone IIs contain potential sources of contamination. However, source protection measures reduce

(Continued on page 10)

Table 3: Current Protection and Recommendations

Protection Measures	Status	Recommendations
Zone I		
Does the Public Water Supplier (PWS) own or control the entire Zone I?	YES	Follow Best Management Practices (BMP's) that focus on good housekeeping, spill prevention, and operational practices to reduce the use and release of hazardous materials.
Is the Zone I posted with "Public Drinking Water Supply" Signs?	YES	Additional economical signs are available from the Northeast Rural Water Association (802) 660-4988.
Is Zone I regularly inspected?	YES	Continue daily inspections of drinking water protection areas.
Are water supply-related activities the only activities within the Zone I?	YES	Continue monitoring non-water supply activities in Zone Is.
Municipal Controls (Zoning Bylaws, Health Regulations, and General Bylaws)		
Does the municipality have Wellhead Protection Controls that meet 310 CMR 22.21(2)?	NO	East Bridgewater does not currently meet DEP's source protection requirements found in 310 CMR 22.21(2). To meet the requirements the Town must submit copies of bylaws, overlay maps and floordrain regulations to the DEP for formal approval.
Do neighboring communities protect the Zone II areas extending into their communities?	YES	Continue to work with neighboring municipalities to improve Zone II wellhead protection controls of all towns.
Planning		
Does the PWS have a Wellhead Protection Plan?	YES	Use the Wellhead Protection Committee to implement goals of Wellhead Protection Plan.
Does the PWS have a formal "Emergency Response Plan" to deal with spills or other emergencies?	NO	Augment plan by developing a joint emergency response plan with fire department, Board of Health, DPW, and local and state emergency officials. Coordinate emergency response drills with local teams.
Does the municipality have a wellhead protection committee?	YES/NO	Water Commissioners act as current committee. Establish a committee that includes representatives from citizens' groups, neighboring communities, and the business community.
Does the Board of Health conduct inspections of commercial and industrial activities?	YES	For more guidance see "Hazardous Materials Management: A Community's Guide" at www.state.ma.us/dep/brp/dws/files/hazmat.doc
Does the PWS provide wellhead protection education?	YES	Aim additional efforts at agricultural, commercial, industrial and municipal uses within the Zone II.

the risk of actual contamination, as illustrated in Figure 2. The water supplier is commended for taking an active role in promoting source protection measures in the Water Supply Protection Areas through:

- Ownership of all five Zone Is.
- Coordinating protection efforts with neighboring communities.
- Developing a Wellhead Protection Plan.
- Providing source protection education that includes the local school system.

Source Protection Recommendations:

To better protect the sources for the future:

- ✓ Continue regular Zone I inspections.
- ✓ Continue and expand source protection education, target residents, businesses and farmers.
- ✓ Work with emergency response teams to ensure that they are aware of the stormwater drainage in your Zone II and to cooperate on responding to spills or accidents.
- ✓ Partner with local businesses to ensure the proper storage, handling, and disposal of hazardous materials.
- ✓ Monitor progress on any ongoing remedial action conducted for the known oil or contamination sites.
- ✓ Work with farmers in your protection areas to make them aware of your water supply and to encourage the use of a NRCS farm plan to protect water supplies.

Conclusions:

These recommendations are only part of your ongoing local drinking water source protection. Additional source protection recommendations are listed in Table 3, the Key Issues above and Appendix C.

DEP staff, informational documents, and resources are available to help you build on this SWAP report as you continue to improve drinking water protection in your community. Grants and loans are available through the Drinking Water State Revolving Loan Fund, the Clean Water State Revolving Fund, and other sources. For more information on grants and loans, visit the Bureau of Resource Protection's Municipal Services web site at: <http://mass.gov/dep/brp/mf/mfpubs.htm>.

The assessment and protection recommendations in this SWAP report are provided as a tool to encourage community discussion, support ongoing source protection efforts, and help set local drinking water protection priorities. Citizens and community officials should use this SWAP report to spur discussion of local drinking water protection measures. The water supplier should supplement this SWAP report with local information on potential sources of contamination and land uses. Local information should be maintained and updated periodically to reflect land use changes in the Zone II. Use this information to set priorities, target inspections, focus education efforts, and to develop a long-term drinking water source protection plan.

Section 4: Appendices

- A. Regulated Facilities within the Water Supply Protection Area
- B. Table of Tier Classified Oil and/or Hazardous Material Sites within the Water Supply Protection Areas
- C. Additional Documents on Source Protection

What is a Zone III?

A Zone III (the secondary recharge area) is the land beyond the Zone II from which surface and ground water drain to the Zone II and is often coincident with a watershed boundary.

The Zone III is defined as a secondary recharge area for one or both of the following reasons:

1. The low permeability of underground water bearing materials in this area significantly reduces the rate of groundwater and potential contaminant flow into the Zone II.
2. The groundwater in this area discharges to a surface water feature such as a river, rather than discharging directly into the aquifer.

The land uses within the Zone III are assessed only for sources that are shown to be groundwater under the direct influence of surface water.

Additional Documents:

To help with source protection efforts, more information is available by request or online at mass.gov/dep/brp/dws including:

1. Water Supply Protection Guidance Materials such as model regulations, Best Management Practice information, and general water supply protection information.
2. MA DEP SWAP Strategy
3. Land Use Pollution Potential Matrix
4. Draft Land/Associated Contaminants Matrix

APPENDIX A: REGULATED FACILITIES WITHIN THE WATER SUPPLY PROTECTION AREA

DEP Permitted Facilities

DEP Facility Number	Facility Name	Street Address	Town	Permitted Activity	Activity Class
798	RIDDERS SEPTAGE	OAK STREET	EAST BRIDGEWATER	Ground Water Facility (BRP)	Groundwater Discharge
27984	COLLINS CRANE & RIGGING SERVICE INC	408 SPRINGS ST	EAST BRIDGEWATER	Generator of Hazardous Waste	Very Small Quantity Generator of Hazardous Waste
27985	TOWNE CLEANERS	5 W UNION ST	EAST BRIDGEWATER	Generator of Hazardous Waste	Very Small Quantity Generator of Hazardous Waste
29385	PRECISE ENGINEERING INC	24 W UNION ST	EAST BRIDGEWATER	Generator of Hazardous Waste	Very Small Quantity Generator of Hazardous Waste
33401	EJM AUTO	556 BEDFORD ST	EAST BRIDGEWATER	Generator of Hazardous Waste	Very Small Quantity Generator of Hazardous Waste
33729	BATTIS AUTO BODY	26 N CENTRAL ST	EAST BRIDGEWATER	Generator of Hazardous Waste	Very Small Quantity Generator of Hazardous Waste
35820	EAST BRIDGEWATER TOWN OF D P W	101 WILLOW AVE	EAST BRIDGEWATER	Generator of Hazardous Waste	Very Small Quantity Generator of Hazardous Waste
130652	MUELLER CORP	530 SPRING ST	EAST BRIDGEWATER	Plant	Air Quality Permit
130652	MUELLER CORP	530 SPRING ST	EAST BRIDGEWATER	Generator of Hazardous Waste	Small Quantity Generator
130652	MUELLER CORP	530 SPRING ST	EAST BRIDGEWATER	Generator of Hazardous Waste	Small Quantity Generator of Waste Oil or PCBs
130652	MUELLER CORP	530 SPRING ST	EAST BRIDGEWATER	Sewer Connection or Groundwater Discharge	Industrial Waste Water Holding Tank
136920	CUMBERLAND FARMS INC #2424	143 BEDFORD ST	EAST BRIDGEWATER	Fuel Dispenser	Fuel Dispenser
137315	CUMBERLAND FARMS #2074	1055 WASHINGTON ST	EAST BRIDGEWATER	Fuel Dispenser	Fuel Dispenser
209008	COUNTRY CONVENIENCE INC	210 POND ST	EAST BRIDGEWATER	Fuel Dispenser	Fuel Dispenser

DEP Permitted Facilities Continued

DEP Facility Number	Facility Name	Street Address	Town	Permitted Activity	Activity Class
226431	CARLS (ALMEIDA) AUTO BODY	42 R NO CENTRAL ST	EAST BRIDGEWATER	Generator of Hazardous Waste	Very Small Quantity Generator of Waste Oil or PCBs
307503	EAST BRIDGEWATER PRIME	49 CENTRAL ST	EAST BRIDGEWATER	Fuel Dispenser	Fuel Dispenser
325962	ALLOY CASTINGS CO INC	151 W UNION ST	EAST BRIDGEWATER	Generator of Hazardous Waste	Very Small Quantity Generator of Hazardous Waste

Underground Storage Tanks

Facility Name	Address	Town	Tank Material	Tank Type	Tank Leak Detection	Capacity (gal)	Contents
A L PRIME ENERGY INC ID #535	49 CENTRAL ST	EAST BRIDGEWATER	Cathodic	2 Walls	Interstitial Monitoring	6000	Gasoline
			Cathodic	2 Walls	Interstitial Monitoring	5000	Gasoline
			Cathodic	2 Walls	Interstitial Monitoring	5000	Gasoline
ALVIN HOLLIS & CO ID #28424	444 WALNUT ST	EAST BRIDGEWATER	Steel	1 Wall	Inventory Record-Keeping	10000	Fuel Oil
			Steel	1 Wall	Inventory Record-Keeping	10000	Fuel Oil
			Steel	1 Wall	Inventory Record-Keeping	10000	Fuel Oil
			Steel	1 Wall	Inventory Record-Keeping	10000	Fuel Oil
			Steel	1 Wall	Inventory Record-Keeping	10000	Fuel Oil
COUNTRY CONVENIENCE STORE ID #13250	210 POND ST	EAST BRIDGEWATER	Cathodic	1 Wall	Approved In- Tank Monitor	4000	Gasoline
			Cathodic	1 Wall	Approved In- Tank Monitor	4000	Gasoline
			Cathodic	1 Wall	Approved In- Tank Monitor	2000	Gasoline

Underground Storage Tanks Continued

Facility Name	Address	Town	Tank Material	Tank Type	Tank Leak Detection	Capacity (gal)	Contents
CUMBERLAND FARMS #2074 ID #13245	1055 WASHINGTON ST	EAST BRIDGEWATER	Reinforced	2 Walls	Interstitial Monitoring	8000	Gasoline
			Reinforced	2 Walls	Interstitial Monitoring	6000	Gasoline
			Reinforced	2 Walls	Interstitial Monitoring	6000	Gasoline
CUMBERLAND FARMS #2424 ID #18684	143 BEDFORD ST	EAST BRIDGEWATER	Reinforced	1 Wall	Approved In- Tank Monitor	8000	Gasoline
			Reinforced	1 Wall	Approved In- Tank Monitor	8000	Gasoline
			Reinforced	1 Wall	Approved In- Tank Monitor	8000	Gasoline

For more information on underground storage tanks, visit the Massachusetts Department of Fire Services web site: <http://www.state.ma.us/dfs/ust/ustHome.htm>

Note: This appendix includes only those facilities within the water supply protection area(s) that meet state reporting requirements and report to the appropriate agencies. Additional facilities may be located within the water supply protection area(s) that should be considered in local drinking water source protection planning.

APPENDIX B – Table of Tier Classified Oil and/or Hazardous Material Sites within the Water Supply Protection Areas

DEP's datalayer depicting oil and/or hazardous material (OHM) sites is a statewide point data set that contains the approximate location of known sources of contamination that have been both reported and classified under Chapter 21E of the Massachusetts General Laws. Location types presented in the layer include the approximate center of the site, the center of the building on the property where the release occurred, the source of contamination, or the location of an on-site monitoring well. Although this assessment identifies OHM sites near the source of your drinking water, the risks to the source posed by each site may be different. The kind of contaminant and the local geology may have an effect on whether the site poses an actual or potential threat to the source.

The DEP's Chapter 21E program relies on licensed site professionals (LSPs) to oversee cleanups at most sites, while the DEP's Bureau of Waste Site Cleanup (BWSC) program retains oversight at the most serious sites. This privatized program obliges potentially responsible parties and LSPs to comply with DEP regulations (the Massachusetts Contingency Plan – MCP), which require that sites within drinking water source protection areas be cleaned up to drinking water standards.

For more information about the state's OHM site cleanup process to which these sites are subject and how this complements the drinking water protection program, please visit the BWSC web page at <http://www.state.ma.us/dep/bwsc>. You may obtain site -specific information two ways: by using the BWSC Searchable Sites database at <http://www.state.ma.us/dep/bwsc/sitelist.htm>, or you may visit the DEP regional office and review the site file. These files contain more detailed information, including cleanup status, site history, contamination levels, maps, correspondence and investigation reports, however you must call the regional office in order to schedule an appointment to view the file.

The table below contains the list of Tier Classified oil and/or Hazardous Material Release Sites that are located within your drinking water source protection area.

Table 1: Bureau of Waste Site Cleanup Tier Classified Oil and/or Hazardous Material Release Sites (Chapter 21E Sites) - Listed by Release Tracking Number (RTN)

RTN	Release Site Address	Town	Contaminant Type
4-0000526	210 POND ST	EAST BRIDGEWATER	Oil
4-0000594	24 WEST UNION ST	EAST BRIDGEWATER	Oil and Hazardous Material
4-0000781	1615 MAIN ST RTE 27	HANSON	Hazardous Material
4-0000860	49 CENTRAL ST	EAST BRIDGEWATER	Oil
4-0012369	4-6 WEST UNION ST	EAST BRIDGEWATER	Oil
4-0012940	36 COOK ST	EAST BRIDGEWATER	Hazardous Material
4-0013087	COOK ST	EAST BRIDGEWATER	Hazardous Material
4-0014476	498 BEDFORD ST	EAST BRIDGEWATER	Oil

For more location information, please see the attached map. The map lists the release sites by RTN.

* Site recently classified, not reflected in current GIS map.